strate and the second substrate are materials which are more rigid than the third substrate, and the third substrate is a substrate which is bendable.

[0036] Note that, also in the above-mentioned construction, it is preferable that the above-mentioned semiconductor element is a thin film transistor in which a semiconductor layer that overlaps the gate electrode while sandwiching an insulating film therebetween serves as a channel, and the steps of forming the above-mentioned semiconductor layer involve radiating a laser light which scans in the same direction as the channel length direction of the above-mentioned channel.

[0037] According to the manufacturing method of the present invention for manufacturing a semiconductor device having a light emitting element in which a layer containing an organic compound serves as a light emitting layer, by using a peeling method in which film stress occurring between the two layers is utilized to perform the peeling, there is provided a method of manufacturing a semiconductor device, characterized by including:

[0038] a first step of forming onto a first substrate a layer to be peeled off that contains one of a semiconductor element and a light emitting element in which a layer containing an organic compound serves as a light emitting layer;

[0039] a second step of adhering a second substrate to the layer to be peeled off with a first adhesive, and sandwiching the layer to be peeled off between the first substrate and the second substrate to which a film is applied;

[0040] a third step of separating the layer to be peeled off and the first substrate;

[0041] a fourth step of adhering a third substrate to the layer to be peeled off with a second adhesive, and sandwiching the layer to be peeled off between the second substrate and the third substrate;

[0042] a fifth step of separating the film and the second substrate, and forming the layer to be peeled off, for which the film, the second adhesive and the third substrate serve as a support; and

[0043] a sixth step of curving the third substrate.

[0044] According to the above-mentioned construction, the film is a tape having a photosensitive adhesive on one or both sides thereof, and, in the fifth step, light is irradiated to separate the film and the second substrate. Further, it is desired that the first substrate and the second substrate are materials which are more rigid than the third substrate, and the third substrate is a substrate which is bendable.

[0045] Note that, also in the above-mentioned construction, it is preferable that the above-mentioned semiconductor element is a thin film transistor in which a semiconductor layer that overlaps the gate electrode while sandwiching an insulating film therebetween serves as a channel, and the steps of forming the above-mentioned semiconductor layer involve radiating a laser light which scans in the same direction as the channel length direction of the above-mentioned channel.

[0046] The semiconductor device obtained according to the above-mentioned manufacturing method of the present invention as described above, has various characteristics.

[0047] First construction of the present invention as disclosed in the present specification relates to a semiconductor device, characterized in that a plurality of thin film transistors are provided on a base having a curved surface curved in a concave or convex shape, and the channel length directions of the thin film transistors are all arranged in the same direction, and the above-mentioned channel length directions run in a different direction from the direction in which the above-mentioned base is curved.

[0048] Further, the present invention may also be applied in a case where different thin film transistors are formed to a pixel portion and to a drive circuit, respectively. That is, according to second construction of the invention that represents another construction thereof, there is provided a semiconductor device, characterized in that a pixel portion and a drive circuit portion are formed onto a substrate having a curved surface that is curved in a concave or a convex shape and the channel length direction of a thin film transistor provided to the above-mentioned pixel portion and the channel length direction of a thin film transistor provided to the drive circuit portion are arranged so as to run in the same direction, and the above-mentioned channel length direction is different from the direction in which the base is curved. Note that, the design rule of this pattern is approximately from 5 to 20 μm, and approximately 10^6 to 10^7 TFTs are built onto the substrate for the drive circuit and for the pixel portion, respectively.

[0049] Further, each of the above-mentioned constructions is characterized in that the above-mentioned channel length direction is the same direction as the scanning direction by the laser light that is irradiated onto the semiconductor layer of the above-mentioned thin film transistor. In a case where the channel for the thin film transistor is formed using a semiconductor film that is crystallized on the substrate by laser annealing, when the crystal growth direction and the carrier's movement direction are aligned with each other, high field effect mobility can be obtained. In other words, by aligning the crystal formation direction and the channel length direction, the field effect mobility can be raised substantially. In a case where a continuously oscillating laser beam is irradiated onto a non-monocrystal semiconductor film to achieve the crystallization, the liquid/solid boundary can be maintained and continuous crystal growth can be achieved along the laser beam's scan direction. For the laser light, it is possible to use a gas laser such as an excimer laser, a solid-state laser such as a YAG laser, or a semiconductor laser. Further, the laser oscillation may be either continuous oscillation or pulse oscillation, and the shape of the laser beam may be linear or rectangular.

[0050] Further, each of the above-mentioned constructions is characterized in that the above-mentioned curving direction and the above-mentioned channel length direction run perpendicular to each other. That is, the direction perpendicular to the channel length direction is the channel width direction, and third construction of the present invention which represents another construction thereof relates to a semiconductor characterized in that a plurality of thin film transistors are provided onto a base having a curved surface that is curved in a concave or a convex shape, the channel width directions of the plurality of thin film transistors are all arranged in the same direction, and the above-mentioned channel width directions run in the same direction as the direction in which the above-mentioned base is curved.